

REMARKS

As a preliminary matter, Applicants thank the Examiner for the continued allowance of claims 1-6.

Claims 7-12 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner asserts that the limitation “except $k=1$, $s=1$ and $n=2$ ” is not supported by the Specification. Applicants therefore traverse this rejection in its entirety. The Specification fully supports the limitation as it was last amended.

The Examiner appears to have misread the text and examples from page 44 of the present Specification. Although the Examiner is correct that several of the examples shown on page 44 do assign the variables in question the values cited by the Examiner, the Examiner is incorrect in the assertion that these values for the variables must *always* be so assigned. Page 44 clearly features how the values for k , s , and n may individually and/or collectively change for each of the examples and embodiments described. Applicants simply are not required to claim every single possible embodiment from the Specification though, as the Examiner appears to be implying. The written description requirement is not violated if Applicants choose to claim only some disclosed embodiments, and not others.

Applicants further traverse the Section 112 rejection because it is based on a factually erroneous assertion. The Examiner’s statement that “the values $k=1$, $s=1$ and $n=2$ are utilized in the examples shown” is incorrect. Not one of the four examples shown on

page 44 of the present Specification collectively includes all of these values together. Page 44 lists the following examples:

- (1) $k = 1, s = 1, n = 1$
- (2) $k = 1, s = 2, n = 1$
- (3) $k = 3, s = 2, n = 1$, and
- (4) $k = 3, s = 2, n = 2$

Nowhere on page 44 is described the Examiner's own asserted example of "k=1, s=1 and n=2." The rejection therefore, appears to be based on at least this clear error, and it should be withdrawn for at least such reasons as well.

Lastly, Applicants further remind the Examiner that page 44 of the present Specification even expressly states that the cited embodiments "are used as examples, but the present invention is not limited to these." (Lines 20-21). In other words, page 44 clearly describes a basis for how the present invention may optimize, change, or exclude particular values for the variables k, s, and n. The present Specification therefore, clearly conveys to one skilled in the art that the present inventors had possession of the claimed invention. Accordingly, for any and all of the foregoing reasons, the outstanding Section 112 rejection should be withdrawn.

Claims 7-12 again stand rejected under 35 U.S.C. 102(b) as being anticipated by Reed et al. (U.S. 5,961,658). Applicants respectfully traverse the repetition of this rejection in its entirety, first for being nonresponsive, and second for failing to give any consideration to several limitations of the claims, as required.

Section 707.07(f) of the MPEP expressly places a burden upon the Examiner to, when repeating a previous rejection, first answer all of the meritorious arguments submitted by Applicants that traversed the rejection. In the present case, however, the Examiner has not done so. The Examiner's statement that the previous meritorious arguments were "moot in view of the new grounds of rejection" is clearly erroneous. The Section 102 rejection based on Reed is identical to the rejection of the previous Office Action. The mere fact that the Examiner has added a new Section 112 rejection, in *addition* to this Section 102 rejection, does not relieve the Examiner of the specific burden to answer Applicant's traversal of the same anticipation rejection.

Applicant's arguments against this rejection would only have been "moot in view of the new grounds of rejection" if the Examiner had withdrawn the rejection. The Examiner did not withdraw the Section 102 rejection, however, and therefore all of Applicant's arguments against this rejection remain unchallenged on the record. Because the Examiner has a burden to answer all meritorious arguments, the failure to do so warrants withdrawal of the rejection for at least these reasons.

The rejection should further be withdrawn because it still fails to consider several significant features and limitations of the present claims. The Examiner even admits that no consideration was given to the limitations relating to the excluded values of k, s, and n, which were added in Amendment B, filed June 19, 2006. As discussed above, the Section 112 rejection is clearly erroneous, and it was not a valid basis for the Examiner to simply ignore significant limitations of the claims. The prior art of record does not read upon the

recited values of k, s, and n, as previously argued in detail. Because no consideration was given to such clearly novel limitations, the rejection should also be withdrawn for at least these reasons as well.

Moreover, the Examiner has also failed to give any consideration to the features of the present claims that relate to how the particular convolutions in recording and reproducing occur in a main path of the modulation circuit. As pointed out to the Examiner previously, the cited convolutions from Reed are already excluded from Reed's process, and are therefore not in the main path of the demodulating circuit. These features are specifically recited in the present claims, but they have not been given any consideration. The presence of these limitations in the claims, by themselves, entirely defeat the outstanding anticipation rejection based on Reed. For at least these still further reasons, the Section 102 rejection based on Reed must also be withdrawn.

Differences between the present invention and Reed may also be clearly seen by comparing the differences between transfer functions. Reed expressly discloses, at col. 7, TABLE 1, the following transfer functions:

TABLE 1

Channel	Transfer Function
PR4	$(1 - D)(1 + D)$
EPR4	$(1 - D)(1 + D)^2$
EEPR4	$(1 - D)(1 + D)^3$

In contrast, according to the present claims (and also the embodiments described in the present Specification), the transfer functions will conform to a different Table, as follows:

	Transfer Function
Claims 7, 9, 11	$(1 - D)(k - sD)(1 + D)^n$
Embodiment 1	$(1 - D)(1 - D)(1 + D)$
Embodiment 2	$(1 - D)(2 - D)(1 + D)$
Embodiment 3	$(1 - D)(3 - 2D)(1 + D)$
Embodiment 4	$(1 - D)(3 - 2D)(1 + D)^2$

The Examiner can see from this straightforward comparison that Reed simply does not anticipate the present invention. Whether or not “n is not limited to 2” in Reed, Reed simply does not contain $(k - sD)$ as a factor in its described transfer functions. Accordingly, the outstanding anticipation rejection is unwarranted, and should be withdrawn for yet these still further reasons.

Although Applicant acknowledges that the Examiner is always entitled to perform another prior art search, the failure to even consider the many limitations discussed above requires that potential new grounds of rejection, if any, be submitted in a nonfinal Office Action. The amendments to independent claims 7, 9, and 11 herein are merely clarifications of the recited mathematical formulae into English. The novel limitations of the present claims that relate to the main path of the demodulating circuit, for example, were

already entered from Amendment B. Therefore, the Examiner has already performed any necessary prior art search to consider these existing limitations, as indicated by the Advisory Action mailed July 10, 2006.

For all of the foregoing reasons, Applicant submits that this Application, including claims 1-12, is in condition for allowance, which is respectfully requested. The Examiner may treat this Response as a formal request to interview the case if there are any remaining issues that are not resolved by this Response. The Examiner is invited to contact the undersigned attorney to schedule a convenient time for such an interview before any further Office Actions are mailed.

Respectfully submitted,

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